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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,353	12/21/2001	David GenLong Chow	5038-098	5504

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Walter D. Fields  
MARGER JOHNSON & McCOLLOM, P.C.  
1030 S.W. Morrison Street  
Portland, OR 97205

EXAMINER

TRAN, TAN N

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/029,353

Applicant(s)

CHOW, DAVID GENLONG

Examiner

TAN N TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 07/01/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-15, 18-26, 32-35 and 37-44 is/are pending in the application.

4a) Of the above claim(s) 27-31 is/are withdrawn from consideration.

- 5) ☒ Claim(s) 20-26, 32-35 and 37-44 is/are allowed.

- 6) ☒ Claim(s) 1-3, 6, 10, 12, 13 and 18 is/are rejected.

- 7) ☒ Claim(s) 7-9, 11, 14, 15 and 19 is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Information Disclosure Statement

1. If applicant is aware of any relevant prior art, he/she requested to cite it on form PTO-1449 in accordance with the guidelines set forth in M.P.E.P.

609.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3,6,10,12,13,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juan et al. (2003/0099321) in view of Galli (2002/0008251).

With regard to claim 1, Juan et al. discloses a dielectric layer 390 and transmission line element 386 having a plurality of spaced lines, each line having a proximal end and a distal end; and a plurality of delay elements (32-38), each driving the proximal end (0-N) of respective one of the spaced lines (MTap (0)- Mtap (N)). (Note figs. 8,10 of Juan et al.).

Juan et al. does not disclose a plurality of drivers wherein each of drivers receiving a common input signal.

However, Galli discloses a plurality of drivers wherein each of drivers (11-13) receiving a common input signal. (Note fig. 5 of Galli).

Therefore, it would have been obvious to one of ordinary skill in the art to form the Juang et al.'s device having a plurality of drivers wherein each of drivers receiving a common input signal such as taught by Galli in order to drive a following stage only upon a changeover or transition of the comparator and through a predetermined time period.

With regard to claim 2, Juang et al. and Galli disclose all the claimed subject matter except for the height of the conductive material is at least two times the distance between the lines. However, it would have been obvious to one of ordinary skill in the art to form the height of the conductive material is at least two times the distance between the lines in order to secure the electrical connection between the present device and external component.

With regard to claim 3, Juang et al. discloses the conductive material defines three separate conductive lines (Tap (1-3)) formed over the insulating layer 390. (Note fig. 10 of Juang et al.). Juang et al. and Galli disclose all the claimed subject matter except for the distance between the lines less than their height. However, it would have been obvious to one of ordinary skill in the art to form the distance between the lines less than their height in order to secure the electrical connection between the present device and external component.

With regard to claim 6, Juang et al. discloses an active layer 382 serves as ground plane in contact with the insulating layer 390 on a side thereof opposite the spaced lines. (Note lines 19-22, paragraph 0098, page 8, fig. 10 of Juang et al.).

With regard to claim 10, Juang et al. and Galli disclose all the claimed subject matter except for the second dielectric over and between the lines. However, it would have been obvious to one of ordinary skill in the art to form the second dielectric over and between the lines in order to secure electrical isolation between each of transmission lines.

With regard to claims 12,13, Juan<sub>g</sub> et al. discloses an active layer 382 serves as ground plane; a dielectric layer 390 formed over the active layer 382; and transmission line element 386 formed over the dielectric layer 390, wherein the transmission line element 386 having a plurality of spaced lines (Tap (1-N)), each of conductive lines (Tap (1-N)) comprising: opposite primary faces, and opposite secondary faces, one of the secondary faces in contact with the dielectric layer 390 to support the conductive line relative thereto; primary faces of adjacent conductive lines defining a gap between; a plurality of delay elements (32-38), each driving to respective one of the spaced lines (MTap (0)- Mtap (N)). (Note lines 19-22, paragraph 0098, page 8, figs. 8,10 of Juan<sub>g</sub> et al.).

Juan<sub>g</sub> et al. does not disclose a plurality of amplifiers wherein the amplifiers comprise inputs electrically coupled in common to a signal node

However, Galli discloses a plurality of drivers wherein each of drivers (11-13) having a plurality of inputs and receiving a common input signal. (Note fig. 5 of Galli).

Therefore, it would have been obvious to one of ordinary skill in the art to form the Juang et al.'s device having a plurality of drivers wherein each of drivers receiving a common input signal such as taught by Galli in order to drive a following stage only upon a changeover or transition of the comparator and through a predetermined time period.

Juan<sub>g</sub> et al. and Galli do not disclose the gap distance less than the height of the conductive lines or the height is at least two times the gap distance. However, it would have been obvious to one of ordinary skill in the art to form the gap distance less than the height of the conductive lines or the height is at least two times the gap distance in order to secure the electrical connection between the present device and external component.

Juan et al. and Galli disclose all claimed invention, except the plurality of drivers to be a plurality of amplifiers. However, although Juan et al. and Galli do not teach exact the type of the driver as that claimed by Applicant, the type differences are considered obvious design choices and are not patentable unless unobvious or expected results are obtained from these changes. It appears that these changes produce no functional differences and therefore would have been obvious. Note in re Leshin, 125 USPQ 416.

With regard to claim 18, Juan et al. discloses the transmission line element 386 having at least three (Tap (1-3)) conductive lines. (Note fig. 10 of Juan et al.).

***Allowable Subject Matter***

3. Claims 20-26,32-35,37-44 are allowable over the prior art of record because none of these references disclose or can be combined to yield the claimed invention such as each conductive line comprising a first edge against the surface of the dielectric; opposing sidewalls extending away from the dielectric, and a second edge opposite the first edge, and each of amplifiers driving the source end of the at least one of the conductive lines as recited in claim 20; and a data buffer to source a data signal to the plurality of conductive lines as recited in claim 32.

4. Claims 7-9,11,14,15,19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7-9,11,14,15,19 are allowable over the prior art of record, because none of these references disclose or can be combined to yield the claimed invention such as the h:s ratio

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associated with the height of the conductive lines relative to their spacing therebetween is greater than the  $w:t$  ratio associated with the width of the center conductive line relative to a thickness of the dielectric as recited in claims 7,14, the dielectric comprises a dielectric constant the same as that of the dielectric beneath the conductive material as recited in claim 11, the ratio  $h:s$  for the height  $h$  of the conductive lines relative to the gap distance  $s$  being greater than 1.5 times the ratio  $W:t$  for the width  $W$  of the center conductive line relative to the dielectric thickness  $t$  as recited in claim 19.

### **Response to Amendment**

5. Applicant's arguments with respect to claims 1-3,6,10,12,13,18 have been considered but are moot in view of the new ground(s) of rejection.

### **Conclusion**

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

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calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tan Tran whose telephone number is (703) 305-3362. The examiner can normally be reached on M-F 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TT

Sep 2003

  
**Minhloan Tran**  
**Primary Examiner**  
**Art Unit 2826**